

## **AMENDMENTS TO THE SPECIFICATION:**

### **IN THE SPECIFICATION:**

Page 1, paragraph 1, amend as follows:

The invention pertains to a method and a device for hot repair of heating flues of a coke-oven battery with which, even during the construction of the heating flues, the already completed sections of the heating flues are heated by means of heated gas.

Page 1, before line 5, insert a title, centered on the page, as follows:

## **BACKGROUND OF THE INVENTION**

Page 1, amend paragraph 2, as follows:

It is known from EP 0 421 174 131 that even during the construction of the heating flues, the already completed sections of each heating flue are heated to a temperature of approximately 250° C by means of heated air. The air is injected through a heating tube (calorifier) by means of a compressor into the heating flues and the air exits the flues through a chimney at the upper completed end. The heating of the air required by this method is done through indirect heat exchange with the hot parts of the coke-oven battery. The heating tube is installed either above the regenerator grating in the regenerator of the coke oven or on the oven bottom.

Page 2, before line 1, insert the title, centered on the page, as follows:

## **SUMMARY OF THE INVENTION**

Page 2, paragraph 1, amend as follows:

The problems are solved by utilizing an air reversing device according to the present invention. The air reversing device separates the completed section of the heating flue from the non-completed portion of the heating flue and which directs the heating gas. In addition, an air reversing device according to the present invention can be moved incrementally upwardly with the progress of the work on the heating flue. Furthermore, the air reversing device can include a sliding valve for regulating the flow of combustion air through the flues and the device. And even further, an air reversing

device according to the present invention can include a temperature monitor which monitors the temperature at at least one temperature measurement point. Yet even further, an air reversing according to the present invention can include multiple inlets and multiple outlets such that the completed portion of more than two heating flues can be heated by the air reversing device. Furthermore, the flow of heated gasses can be reversed without modification to the air reversing device to further balance the temperatures in the completed portion.

Page 2, starting at line 4, delete paragraph 2.

Page 2, line 6, paragraph 3, amend as follows:

According to the invention, during the construction of the heating flues, the already completed sections of each heating flue are heated to a temperature of, e. g., approximately 250° C, by means of completely normal combustion air that is preheated by the regenerator of the coke oven, wherein the flow paths in the coke-oven battery for combustion air and exhaust gas are used by the regenerator. The air reversing device according to the present invention, that follows the construction progress, is installed in the flow path for ovens with twin heating flues. The air reversing device comprises, first, known cover plates that restrict the falling down of mortar, dirt, or anything else into the heating flue during construction, and second, at least one air passage tube that circumvents the frame wall between at least two heating flues, that penetrates the cover plates in the region of its open ends, and that fluidly connects at least two heating flues. The air reversing device can further include a slide valve installed for regulating the throughput of the combustion air.

Page 3, delete paragraph 5, lines 23-25.

Page 3, insert paragraphs and title starting at line 26 as follows.

Additional details, features, advantages and objects of the invention will become apparent to those skilled in the art upon reading and understanding the following detailed description of the preferred embodiments.

## **BRIEF DESCRIPTION OF THE DRAWINGS**

Reference may now be had to the drawings, which illustrates various embodiments that the invention may take in physical form and in certain parts and arrangements of parts wherein:

Page 3, amend the Figure 1 paragraph as follows:

FIG. 1 is a vertical section, in schematic representation, through several twin heating flue pairs, in which two air reversing devices according to the present invention are arranged;

Page 3, amend the Figure 2 paragraph as follows:

FIG. 2 is a vertical section, in schematic representation, through several heating flue pairs, in which a second configuration of the air reversing device is arranged, which can heat three heating;

Page 4, amend the Figure 3A paragraph as follows:

FIG. 3A is a cross-sectional enlargement taken along line IIIA-IIIA in FIG. 3B of the air reversing device shown in FIG. 1; and

Page 4, amend the Figure 3B paragraph as follows:

FIG. 3B is a view taken along line IIIB-IIIB in FIG. 3A of the air reversing device shown in FIG 1.

Page 4, insert a title centered on the page before line 8:

## **DESCRIPTION OF THE PREFERRED EMBODIMENTS**

Page 4, paragraph 3, starting at line 8, amend as follows:

Referring now to the drawings wherein the showings are for the purpose of illustrating preferred embodiments of the invention only and not for the purpose of

limiting the same, Figure 1 shows a section through two heating flue pairs 1 and 2 to be repaired. Corresponding air reversing devices 3, with air passage tubes 4 and 4', rearranged in heating flue pairs 1 and 2. The air passage tubes 4 and 4' are connected in a gas-tight manner at their lower ends to cover plates 17, 17' that separate the constructed part of the heating flues 1 and 2 from the part still to be constructed. The air passage tubes 4' are each provided with a slide valve 5, with which the amount of air can be regulated for adjusting the desired temperature of approximately 250° C below the air reversing device 3. The temperature below the air reversing device is measured with thermo elements 6.

Page 5, first full paragraph starting at line 10, amend as follows:

The exact arrangement of the air reversing device 3 in the heating flues that are to be repaired and that comprise the frame walls 19 and the sliding walls 24 can be seen in Figures 3A and 3B. The air reversing device comprises the air passage tubes 4 and 4' that are connected in a gas-tight manner to the cover plates 17, 17', where the air passage tubes 4 and 4' are set together with their horizontal ends and locked at each joint of the heating flue walls with the help of at least one locking mechanism 18 that is arranged on the cover plate 17, 17'. Thus, during further construction, the air reversing device 3 can be moved quickly. The air passage tubes 4 and 4' are designed such that 4-6 sections of the frame walls 19 and the sliding walls 24 can be worked on at one time.

Page 5, after the last paragraph at line 29, insert a new paragraph as follows:

The invention has been described with specific reference to the preferred embodiments and alternatives thereof. Further modifications and alterations may occur to others upon reading and understanding the specification. It is intended to include all such modifications and alterations insofar as they come within the scope of the invention.

Delete page 6 in its entirety.

Page 7 amend line 1 as follows: